

## BRIEF COMMUNICATIONS

TABLE 12  
ON-LINE ACCESS AND USE OF HARD COPY BY LIBRARY STAFF OVER THE PAST YEAR  
(N=88)

	Increased (%)	Remained the Same (%)	Decreased (%)	No Response (%)
BA	28 (32)	50 (57)	3 (3)	7 (8)
CA	25 (28)	50 (57)	2 (2)	11 (13)
PA	33 (38)	45 (51)	—	10 (11)
SCI®	51 (58)	25 (28)	—	12 (14)
SSCI™	8 (9)	9 (10)	—	71 (81)

sion of *Index Medicus* from the questionnaire was a mistake.

Despite its relative newness and unique subscription service, Bibliographic Retrieval Services (BRS), Inc., is second only to NLM as the data base broker of choice. And although System Development Corp. uses ORBIT, as does NLM, more respondents utilize Lockheed. Undoubtedly, this is due to particular data base access.

*Science Citation Index*® is the most heavily utilized tool of those surveyed, yet the related *SSCI*™ has the fewest subscribers. An anomaly can be seen in the responses concerning *SSCI*™ (Tables 4 and 5): it has only existed since 1973, yet some respondents claim they use the ten-year volumes of it regularly.

In conclusion, the survey did not support that portion of the hypothesis dealing with the annual growth of physical volumes. As regards storage media, very few respondents indicated any inclination to replace print material with microforms. However, the second part of the hypothesis, dealing with increased on-line access, was validated by a slight majority.

Overall, few libraries reported any diminished use of the printed abstracts. The majority in fact reported an increase in use of *Psychological Abstracts* and *Science Citation Index*®. But considering subscription prices of \$2,565 for *Biological Abstracts* and \$3,700 for *Chemical Abstracts*, plus binding costs for each, one can conjecture that a reallocation of these subscription fees would go far in making more on-line searches available and would save a substantial amount of shelf space in the process.

We are currently exploring the possibility of offering unlimited free on-line access to the chemical literature, in lieu either of continuing our subscription to *Chemical Abstracts* or of binding and retaining the printed abstracts. A weaning period may be necessary, because some of our

senior faculty still think of *Chemical Abstracts* as the sine qua non of basic science literature access.

Our present thought is to utilize one of these senior biochemists who has expressed some interest in reviewing our search strategy prior to going on-line. We have no expectation that the scientists wish to attempt searches on their own. We do feel, however, that it would help our formulations to have the initial ones reviewed for possible synonyms, formulas, or trade names with which our staff might not be entirely familiar. We certainly would not want to produce an absolutely erroneous search, after promising prompt, complete, and accurate retrievals at least equal to what the individual might obtain manually.

## REFERENCE

1. LA ROCCO, A., AND FENG, C. *Excerpta Medica* abstracting journals: a case study of costs to medical school libraries. *Bull. Med. Libr. Assoc.* 65: 255-260, Apr. 1977.

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### Using Computerized Literature Searches to Produce Faculty Publications Lists

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TRADITIONALLY, academic librarians have served their faculties by compiling and verifying bibliographies for manuscripts. At the University of Maryland librarians help the faculty members of the Dental School prepare an annual list of their papers and publications that the dean uses in an

annual report and in other intramural reports. This cooperative project is a significant function of the Dental School Faculty Library and Publications Committee; it is also an important venture in promoting the professional services of the library.

Compiling and producing such bibliographic lists can be a laborious, time-consuming, and costly clerical project. However, computerized literature searches offer an efficient alternative, as this brief report will demonstrate.

#### METHOD AND RESULTS

In compiling the list of faculty publications at the University of Maryland Dental School for the 1977/1978 academic year, searches (funded by the Dental School) were run in June 1978 on two computerized literature search services: SCISEARCH (Lockheed Information Systems, Palo Alto, California) and MEDLINE (National Library of Medicine, Bethesda, Maryland). The references retrieved from the computerized literature searches were compared to those obtained directly from questionnaires sent to each of the 224 faculty members at the Dental School.

SCISEARCH was chosen for several reasons: it covers over 2,600 medical and scientific journals, the publications most likely to contain articles by the dental faculty; it can be searched by the institutional or corporate affiliation of every author; and it is the most current data base available (because articles are indexed by title words and are not classified topically).

MEDLINE was selected because it is the most comprehensive data base in dentistry. Although it cannot be searched by author affiliation and tends to lag behind SCISEARCH (because of its comprehensive indexing procedures), MEDLINE seems to be the standard reference for computerized literature searches in dental practice and research.

The SCISEARCH data base was searched by author affiliation using the descriptors: Maryland, Dent, and zip code 21201. Both the 1974-1977 and the 1978 data files were searched for the publications covering the 1977/1978 academic year. The search strategy for 1977 citations on Lockheed File 94, SCISEARCH 1974-1977, was:

```
? SELECT MARYLAND(F)DENT(F)
    21201/CS
1 202 MARYLAND(F)DENT(F)
    21201/CS
? LIMIT1/1452161-2005301
2 57 1/1452161-2005301.
```

The strategy for 1978 citations on Lockheed File 34, SCISEARCH 1978- , was:

```
? SELECTCS=MARYLAND(F)
    CS=DENT(F)CS=21201
1 33 CS=MARYLAND(F)CS=DENT
    (F)CS=21201.
```

Search commands differ between these files because Lockheed changed commands in the process of creating File 34. In searching File 94 an extra command was added to retrieve only those citations with accession numbers put into the system in 1977. As the two strategies above show, fifty-seven citations were retrieved for 1977 and thirty-three for 1978. Of these, seventy were usable; the remainder, all from 1977, had been included in the publications list for the academic year 1976/1977.

The SCISEARCH results were very satisfactory. Searches on both SCISEARCH files took less than five minutes on-line and cost approximately \$10. But SCISEARCH was not only economical; it was also highly reliable. SCISEARCH yielded over 70% of the ninety-eight publications on the final list obtained from faculty questionnaires. Among the remaining 30%, twelve fell outside SCISEARCH's data base. (Examples of such publications were included in the *Journal of the District of Columbia Dental Society* and the *Bulletin of the Mt. Desert Island Biological Laboratories*.)

The MEDLINE search was not as helpful for this project. MEDLINE was cumbersome and more costly, primarily because the data base cannot be searched by author affiliation. Instead the search was run by author name. Because the formats of author's names vary widely, the names were entered by first and, in some cases, only initial and by second initial truncated, to pick up a third initial or abbreviations such as "JR." The 224 faculty names were entered and stored consistent with the following: (AU) BENNETT R OR ALL BENNETT RB: OR PETERSON D OR ALL PETERSON DE:, and so forth. This strategy was then run against the present MEDLINE file to retrieve 1977 and 1978 citations. The search strategy was also stored as an automatic SDI, to avoid reentering the same names for the 1978/1979 list.

The MEDLINE search took two hours to input on-line and cost over \$30.00 in computer time and off-line prints. It retrieved more than 300 citations, each requiring careful scrutiny at additional clerical expense. In addition, over two-thirds of these

citations were discarded. Some had appropriate names of authors not affiliated with the University of Maryland Dental School (for example, R. Bennett at Rutgers University). The remaining citations had to be verified individually—a painstaking task that required matching each citation topic with each faculty research program, present and past (because some reports are not published until several years after the research is completed). Verification and editing of these MEDLINE citations, as well as the SCISEARCH citations, were done by the media librarian at the Dental School.

Searching MEDLINE was also deficient because it missed abstracts of brief individual papers presented at meetings and published in journals such as *Anatomical Record*, *Journal of Dental Research*, and *Federation Proceedings*. In addition, MEDLINE missed a few articles in nonclinical journals, such as *Copeia* and *American Journal of Pharmaceutical Education*. MEDLINE did pick up several publications in regional clinical journals not indexed by SCISEARCH (for example, *Journal of the Baltimore College of Dental Surgery* and *Journal of the Maryland State Dental Association*). But in general, MEDLINE was not as satisfactory for this project as was SCISEARCH.

In summary, the advantages of SCISEARCH were:

1. It covered the basic scientific publications that were relevant;
2. It required no thorough knowledge of faculty research;
3. It was fast and economical; and
4. It was current.

For the next annual publications list, the Faculty Library and Publications Committee at the University of Maryland Dental School plans to search SCISEARCH and circulate the citations to the faculty with a request that they add papers, book chapters, and other scholarly material not retrieved by SCISEARCH. The SCISEARCH printout format will serve as a guide for such supplementary citations. It is expected that, because this procedure minimizes clerical work required by both faculty and librarians, the annual list for 1978/1979 will be even more efficiently compiled and comprehensive than previous lists.

It should be noted that SDILINE includes information about author affiliations for print purposes and, therefore, might be considered for projects

such as this one. However, institutional affiliations in SDILINE are listed for primary authors only and are not directly searchable (that is, they must be stringsearched). Had this feature of SDILINE been selected for the following year's list in this project, it would have been necessary to input all faculty names in a rerun of the costly MEDLINE search strategy, with an additional command to stringsearch the institutional affiliation field (RP) for University, Maryland, and Dental. Many Dental School publications might have been overlooked because the primary authors were not affiliated with the University of Maryland (10% of the Dental School publications for 1977/1978 had primary authors affiliated with institutions other than the University of Maryland).

Likewise, the institutional affiliation of primary authors could have been searched on MEDLINE through Bibliographic Retrieval Services (BRS), Inc., Scotia, New York. But because this data base is derived from MEDLINE tapes, the problems of publication lag, citation of affiliation of primary authors only, and omission of brief paper abstracts could not be avoided. For some purposes a MEDLINE search through BRS might be used to supplement a SCISEARCH search.

#### DISCUSSION

This experimental venture produced an unexpected benefit that demonstrates how librarians can improve their services to faculties. The publications list for 1977/1978 contained ninety-eight articles, more than two-and-one-half times the thirty-seven in the 1976/1977 list. This enormous increase in reported citations was a significant result of using computerized literature searching. For the first time the dean of the Dental School received an extensive, accurate, and efficient documentation of faculty scholarship and productivity.

In this era of accountability librarians should promote innovative applications of their information retrieval systems. These services not only make life easier (and more productive) for teachers, researchers, and scholars, but also strengthen the relationships among librarians and their institutions, thereby providing strong bases of future support for new library projects and services.

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